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TECH CENTER 1600/2800

SEQUENCE LISTING

<110> DING, Jeak Ling  
TAN, Nguan Soon  
HO, Bow  
LAM, Toong Jin

<120> ISOLATED NUCLEIC ACIDS ENCODING A SECRETORY SIGNAL FOR EXPRESSION AND SECRETION OF HETEROLOGOUS RECOMBINANT PROTEINS

<130> 1781-0178P

<140> US 09/426,776  
<141> 1999-10-23

<160> 22

<170> PatentIn version 3.0

<210> 1  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> Chloramphenicol acetyltransferase (CAT) gene forward primer derived from bacteria

<400> 1  
gaagatctgc tggagaaaaa aatcactgg

29

<210> 2  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> Chloramphenicol acetyltransferase (CAT) gene forward primer derived from bacteria

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29

<210> 3  
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<212> DNA  
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<220>  
<223> OaVtgExon2 reverse primer derived from Oreochromis aureus vitellogenin gene exon 2

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21

<210> 4  
<211> 19

*Seq By*

<212> DNA  
<213> Artificial

<220>  
<223> EGFP reverse primer derived from Aequoria victoria green fluorescent protein

<400> 4  
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<210> 5  
<211> 29  
<212> DNA  
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<220>  
<223> B-lactamase forward primer derived from bacteria

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ccgggatcca gaaacgctgg tgaaagtaa 29

<210> 6  
<211> 29  
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<220>  
<223> B-lactamase reverse primer derived from bacteria

<400> 6  
gcggccgtta ccaatgctta atcagtgag 29

<210> 7  
<211> 29  
<212> DNA  
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<220>  
<223> Forward primer from BspSS

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<210> 8  
<211> 30  
<212> DNA  
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<220>  
<223> BamGal forward primer with BamHI restriction site and some beta-galactosidase sequence derived from bacteria

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<210> 9  
<211> 26  
<212> DNA  
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<223> EagGal reverse primer with EagI restriction site

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gcgacggccg ggcagacatg gcctgc

26

<210> 10  
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<212> PRT  
<213> Oreochromis aureus

<400> 10

Gly Ser Asn Leu Gly  
20

<210> 11  
<211> 80  
<212> DNA  
<213> *Oreochromis aureus*

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attcacatcc accagccatg agggtgcttg tactagctct tgctgtggct ctgcgactgg

60

gggaccaggc caacttgggg

80

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<210> 12  
<211> 204  
<212> DNA  
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<220>  
<223> Junction of Vtgss (derived from *Oreochromis aureus*) and CrFCES  
(*Carcinoscorpius rotundicauda* ES - EcoRI-SalI flanking fragment of  
Factor C) determined by sequencing using the Ac5 forward primer and  
pcDNA3.1/BGH reverse primer

<400> 12 gtggaaattct gcagatgcta ccggactcag atcaattcac atccaccaggc catgagggtg 60  
cttgtactag ctcttgctgt ggctctcgca gtgggggacc agtccaacctt gggggatcta 120  
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atcccaqtqa aacaatgtac atac 204

<210> 13  
<211> 51  
<212> PRT

<213> Artificial

<220>

<223> VtgCrFCES protein - Vtg derived from Oreochromis aureus and CrFCES derived from Carcinoscorpius rotundicauda ES - EcoRI-SalI flanking fragment of Factor C

<400> 13

Met Arg Val Leu Val Leu Ala Leu Ala Val Ala Leu Ala Val Gly Asp  
1 5 10 15

Gln Ser Asn Leu Gly Asp Leu Gly Leu Cys Asp Glu Thr Arg Phe Glu  
20 25 30

Cys Lys Cys Gly Asp Pro Gly Tyr Val Phe Asn Ile Pro Val Lys Gln  
35 40 45

*Sab*  
*B*  
Cys Tyr Phe  
50

<210> 14

<211> 152

<212> DNA

<213> Artificial

<220>

<223> Part of the Vtgss-CAT (Vtgss from Oreochromis aureus - CAT of bacterial origin) fusion in the pBSVtgCAT vector

<400> 14

atcgataaagc ttgatgtac cggactcaga tcaattcaca tccaccagcc atgagggtgc 60

ttgtactagc tcttgcgtg gctctcgca gggggaccatgtccaacttg gggatctgc 120

tggagaaaaa aatcactgga tataaccacgg tt 152

<210> 15

<211> 59

<212> DNA

<213> Artificial

<220>

<223> Part of the Vtgss-CAT (Vtgss from Oreochromis aureus - CAT of bacterial origin) fusion in the pBSVtgCAT vector

<400> 15

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<210> 16

<211> 34

<212> PRT

<213> Artificial

<220>

<223> Part of the Vtgss-CAT (Vtgss from Oreochromis aureus - CAT of bacterial origin) fusion in the pBSVtgCAT vector

<400> 16

Met Arg Val Leu Val Leu Ala Leu Ala Val Ala Leu Ala Val Gly Asp  
1 5 10 15

Gln Ser Asn Leu Gly Asp Leu Leu Gln Lys Lys Val Thr Gly Trp Thr  
20 25 30

Thr Val

<210> 17

<211> 3

<212> PRT

<213> Artificial

<220>

<223> Part of the Vtgss-CAT (Vtgss from Oreochromis aureus - CAT of bacterial origin) fusion in the pBSVtgCAT vector

<400> 17

Gly Gly Ala

1

<210> 18

<211> 66

<212> DNA

<213> Artificial

<220>

<223> Part of the nucleotide sequence adjoining Vtgss (derived from Oreochromis aureus) and CAT (derived from bacteria) in the vector psp-VtgCAT

<400> 18

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60

cccaac

66

<210> 19

<211> 155

<212> DNA

<213> Artificial

<220>

<223> Nucleotide sequence of the Vtg-EGFP (Vtg derived from Oreochromis aureus - EGFP derived from Aequoria victoria) fusion in the vector pVtgEGFP

<400> 19

gctagcgcta ccggactcag atcaattcac atccaccaggc catgagggtg cttgtactag

60

ctcttgctgt ggctctcgca gtgggggacc agtccaactt gggggatcca ccggtcgcca

120

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155

<210> 20

<211> 38

<212> PRT  
<213> Artificial

<220>  
<223> Amino acid sequence of the Vtg-EGFP (Vtg derived from *Oreochromis aureus* - EGFP derived from *Aequoria victoria*) fusion in the vector pVtgEGFP

*AI*  
<400> 20

Met Arg Val Leu Val Leu Ala Leu Ala Val Ala Leu Ala Val Gly Asp  
1 5 10 15

Gln Ser Asn Leu Gly Asp Pro Pro Val Ala Thr Met Val Ser Lys Gly  
20 25 30

Val Val Gln Asn Ser Gly  
35

<210> 21  
<211> 204  
<212> DNA  
<213> Artificial

<220>  
<223> Nucleotide sequence at the junction of Vtgss (derived from *Oreochromis aureus*) and B-lactamase (derived from bacteria) in pBADVtgbactKana

*Sent B*  
<400> 21

ctctactgtt tctccataacc cgttttttg ggctaacagg aggaattaac catgagggtg 60

cttgtactag ctcttgctgt ggctctcgca gtgggggacc agtccaacctt gggggatcca 120

gaaacgctgg tgaaagtaaa agatgctgaa gatcagttgg gtgcacgagt gggttacatc 180

gaactggatc tcaacagcgg taag 204

<210> 22  
<211> 51  
<212> PRT  
<213> Artificial

<220>  
<223> Amino acid sequence at the junction of Vtgss (derived from *Oreochromis aureus*) and B-lactamase (derived from bacteria) in pBADVtgbactKana

<400> 22

Met Arg Val Leu Val Leu Ala Leu Ala Val Ala Leu Ala Val Gly Asp  
1 5 10 15

Gln Ser Asn Leu Gly Asp Pro Glu Thr Leu Val Lys Val Lys Asp Ala  
20 25 30

Glu Asp Gln Leu Gly Ala Arg Val Gly Tyr Ile Glu Leu Asp Leu Asn  
35 40 45

Ser Gly Lys  
50